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Missed a Wooden Foreign Body
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Case Report

Chronic Discharging Sinus of Upper Lid Due to the Missed Wooden Foreign Body

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Abstract

Background: Foreign bodies of the orbit can have a diverse range of clinical presentations, which may be perplexing to the most Ophthalmologists. Wooden foreign bodies can remain quiescent for a long time, before presenting with various complications. We report a case of Post-traumatic chronic non-healing discharging sinus in the left upper lid, which on exploration revealed the presence of the missed wooden foreign body. **Case:** A 48-year-old male, presented to Ophthalmic OPD with a complaint of discharge from the left upper eyelid for 18 months. The patient had a history of minor trauma to the left upper eyelid while collecting wood in the forest, 18 months back. The patient was misdiagnosed on previous examinations elsewhere. The diagnosis of retained wooden foreign body was made at our center and surgical exploration was done to remove the same.
Observation: On clinical examination, there was a 2-3mm long sinus in the left upper eyelid with purulent discharge and granulation tissue. Surrounding skin showed hyperpigmentation and excoriation. CT scan orbit was inconclusive. MRI orbit revealed a peripherally enhancing extraconal/conal collection in the left orbit with a central hypo intense structure suggestive of a foreign body. Surgical exploration of the wound was done and a small wooden foreign body measuring 9mm was removed with excision of the sinus tract. **Conclusion:** A history of trauma followed by chronic discharging sinus should evoke suspicion of a retained foreign body. Prompt imaging, followed by surgical exploration should be done to prevent misdiagnosis and inappropriate management.

Key words: Chronic discharging sinus, Post traumatic retained foreign body, retained wooden foreign body.

Introduction

Foreign bodies of the orbit can have a diverse range of clinical presentations, which may be perplexing to most of the ophthalmologists. Wooden foreign bodies can remain quiescent for a long time, before presenting with various complications (Goldberg et al, 1980). Foreign

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bodies can gain entry into the orbit either by traversing between the globe and orbital wall, by perforation of the globe or even after minor trauma. The wound of entry may often be small and self-sealing. The intraorbital organic foreign body might not be detected by standard diagnostic tests, further increasing the diagnostic dilemma. Organic foreign bodies are poorly tolerated and lead to severe inflammatory reactions like orbital cellulitis, orbital abscess, gangrene, chronic discharging sinus, osteomyelitis, hence should be removed urgently (Nasr et al 1999, John et al, 2008).

A patient presenting with a chronic discharging sinus having the previous history of penetrating trauma should evoke suspicion of a retained organic foreign body, regardless of the time interval between the trauma and current presentation. It is important to maintain a high index of suspicion in such cases to avoid misdiagnosis. We report a case of chronic non-healing discharging sinus in the left upper lid, following trauma, which on exploration revealed the presence of the missed wooden foreign body.

Case Report

A 48-year-old male, presented to ophthalmic OPD with a complaint of discharge from the left upper eyelid for 18 months. He had no other ocular complaints except itching and excoriation of the skin of left upper lid. The patient was apparently asymptomatic 18 months back. Then he had trauma to the upper left eyelid with a wooden piece while collecting wood in the forest. He consulted local medical personnel who noticed a small open wound in the center of the left upper lid for which wound dressing was done and some oral medicines were prescribed. There was no other injury and he did not have any episode of diplopia, bleeding from the eye, restricted or painful ocular movement or decreased vision following trauma. Over the period of 18 months there was no sign of wound healing, he consulted local medical personnel multiple times and was prescribed antibiotics every time but discharge did not subside.

Then he consulted with our OPD for further management. On examination, unaided vision in each eye was 6/6p. There was 2-3 mm long sinus in left upper eyelid with purulent discharge and granulation tissue (Figure 1 A). Surrounding skin showed hyperpigmentation and excoriated

scar (Figure 1 A). There was mild mechanical ptosis of the left eye. Extraocular movements were full and free. Anterior and posterior segments were unremarkable in both eyes. The patient did not give a history of any systemic illness.

Routine Blood Investigations including CBC, TLC, DLC, and ESR were within normal limits.

Random blood sugar level was 90 mg/dl. On pus culture, no organism was isolated. Sputum AFB and Bactec culture were negative. X-ray chest PA view was unremarkable.

CT orbit revealed an ill-defined isodense lesion with central linear hyperdensity, with no adjacent bony erosion or extension to eyeball.

MRI orbit was suggestive of a peripherally enhancing extraconal/ conal collection in left orbit with a central hypointense structure suggestive of probable foreign body and secondary inflammatory changes involving the left superior oblique, superior rectus, lacrimal gland and superolateral bony walls of the orbit (Figure 1 B).

Based on MRI finding, surgical exploration under general anesthesia was planned. Per-operatively 2.5cm incision including the sinus was made. Sinus track was identified and explored (Figure 2 A). A wooden foreign body measuring 9mm was found and removed (Figure 2 B). The entire sinus tract was excised and the wound was washed with antibiotic solution. The wound was closed in two layers.

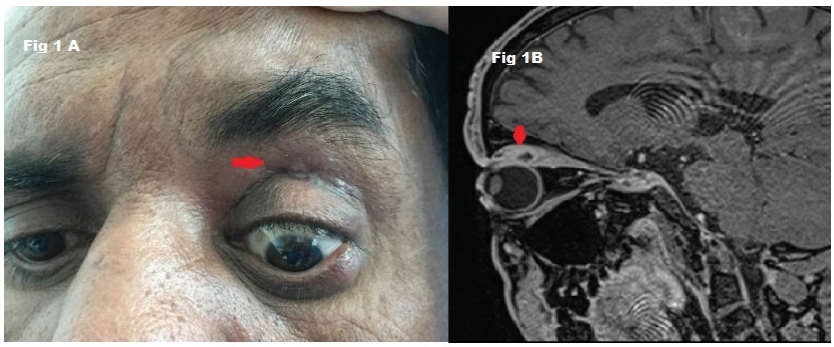

Figure 1: A: Chronic discharging sinus of 2-3 mm with surrounded with hyperpigmented and excoriated scar.

B: MRI orbit revealing peripherally enhancing extraconal/ conal collection in left orbit with a central hypo intense structure ? foreign body and ssecondary inflammatory changes involving the left superior oblique, superior rectus, lacrimal gland and superolateral bony walls of the orbit.

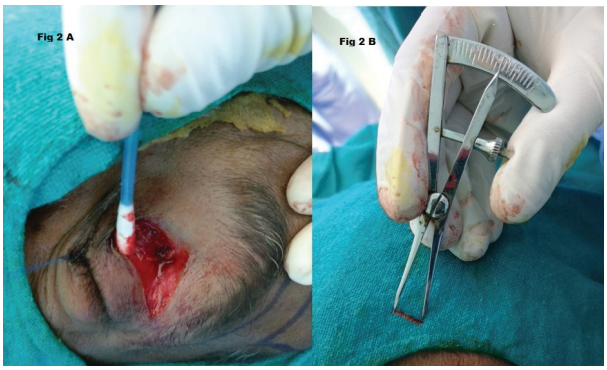

Figure 2: A: Surgical exploration of sinus tract with wooden foreign body

B: Wooden foreign body measuring 9mm.

Figure 3: Post operative photograph of the same patient.

Histopathological examination of excised tissue revealed sinus tract lined by non-specific granulation tissue. The patient was asymptomatic till 6 months of follow up (Figure 3).

Discussion

Although injuries with high-velocity objects lead to intraorbital foreign bodies but many times even in a trivial trauma, foreign bodies can penetrate the orbit resulting into sight-threatening complications (Fulcher et al, 2002).

The fate of orbital foreign bodies depends upon their composition. Most of the inorganic foreign bodies remain silent without causing any symptom for a long period. So these can be left in the absence of specific indications for removal (Ho et al, 2004). Whereas, organic foreign bodies like wood are very frequently associated with potentially sight-threatening complications (Fulcher et al, 2002). They may remain quiescent for a variable period of time and usually present with orbital granuloma, cellulitis, abscess, chronic draining sinus,

gangrene, or osteomyelitis (Goldberg et al, 1980). Hence, prompt surgical exploration is recommended if there is suspicion of organic intraorbital foreign bodies (Fulcher et al, 2002).

The wooden foreign bodies frequently break during attempted removal (Goldberg et al, 1980) with a small self-sealing wound (Banerjee et al, 2003). Hence, if there is a history of trauma with wood followed by chronic discharging sinus, the possibility of a retained foreign body should be kept in consideration.

Appropriate imaging and prompt exploration of the sinus remains the mainstay of management. CT scan is the imaging of choice as it is safe in the presence of metallic foreign bodies and it demonstrates most of the intraorbital foreign bodies (Fulcher et al, 2002). Previous literature suggests that many a times CT scan fails to detect wooden foreign bodies (Green et al, 1990) and MRI is a better imaging modality for detection of the same (Nasr et al, 1999) So MRI can be imaging of choice if there is a definite history of trauma with wood with high suspicion of wooden intraorbital foreign body (Fulcher et al, 2002). Further, an inconclusive CT scan should always be followed by MRI if the patient is having chronic discharging sinus with suspicion of a retained wooden foreign body as in our case.

Several aspects of this case are unusual as the patient was unaware of any foreign body entry

at the time of trauma. He was symptomatic over the period of 18 months, misdiagnosed and mismanaged. Imaging was not advised over this period. MRI report and a discharging sinus lead us to a provisional diagnosis of the retained foreign body for which surgical exploration was done.

After removal of the foreign body along with the sinus tract excision, the patient became asymptomatic except for residual mild ptosis.

Conclusion

We would like to emphasize that intraorbital foreign body can present with a perplexing clinical picture to an ophthalmologist. A history of trauma followed by a nonhealing wound gives a high index of suspicion of retained foreign body, regardless of the severity of trauma and interval between trauma and clinical presentation. Appropriate and prompt imaging followed by surgical exploration remains the mainstay of treatment.

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